

IN THE CLAIMS

1-17. (Canceled)

18. (Currently amended) A method for variably programming the value of frame synchronization bytes in the communication of a multidimensional digital frame structure, the method comprising:

selecting the values of frame synchronization bytes in the overhead section of a transmitted frame;

sending the frame;

receiving the frame;

synchronizing the received frame in response to recognizing the frame synchronization bytes

selecting the values of the frame synchronization bytes in the overhead section of the received frames; and

wherein synchronizing the received frames in response to recognizing the frame synchronization bytes includes synchronizing received frames in response to recognizing the synchronization byte values in the received frames;

selecting the location of the frame synchronization byte values in a transmitted frame; and

selecting the location of the frame synchronization byte values in a received frame;

wherein selecting the locations of frame synchronization byte values in the overhead section of a transmitted frame includes selecting a first frame synchronization byte value in a first number of locations;

wherein selecting the location of the frame synchronization byte values in the received frame includes selecting the first frame synchronization byte value in a second number of locations, less than the first number; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response to recognizing the first frame synchronization byte value in the second number of locations.

19. (Canceled)

20. (Previously presented) The method of claim 18 wherein selecting the frame synchronization byte values in the received frame includes selecting a first frame synchronization byte value; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response to recognizing the first frame synchronization byte value.

21. (Previously presented) The method of claim 18 further comprising:
selecting the number of consecutive frames with recognized frame synchronization bytes; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response recognizing the selected frame synchronization byte values in the selected number of consecutive frames.

22-23. (Canceled)

24. (Previously presented) The method of claim 18 wherein selecting the location of the frame synchronization byte values in a transmitted frame includes selecting first locations for a first byte value, and second locations for a second byte value; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response to recognizing the first frame synchronization byte values in the first locations and the second byte values in the second locations.

25. (Previously presented) The method of claim 18 wherein selecting the location of frame synchronization byte values in the overhead section of a transmitted frame includes selecting first frame synchronization byte values in first locations; and

wherein selecting the location of the bytes to be used for frame synchronization of the received frame includes selecting the first frame synchronization byte values in the first locations.

26. (Canceled)

27. (Previously presented) The method of claim 18 further comprising:
selecting the bit error rate of the frame synchronization byte values.

28. (Original) The method of claim 27 wherein selecting a bit error rate includes selecting an average bit error rate for the selected frame synchronization byte values.

29. (Original) The method of claim 27 wherein synchronizing the received frame in response to recognizing the frame synchronization byte values includes recognizing frame synchronization byte values having a bit error rate less than, or equal to, the selected frame synchronization bit error rates.

30. (Previously presented) The method of claim 18 further comprising:
defining a superframe structure with a predetermined number of frames per superframe; and

wherein selecting the values of frame synchronization bytes in the overhead section of a transmitted frame includes selecting byte values to be used for synchronization in the overhead section of each frame of the superframe;

wherein sending the frame includes sending frames in the superframe structure;
and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes recognizing frame synchronization byte values in each frame of the superframe.

31. (Original) The method of claim 30 further comprising:
selecting the quantity of frame synchronization byte values in the overhead section of the received frame.

32. (Original) The method of claim 31 wherein selecting the quantity of frame synchronization byte values in a received frame includes selecting a quantity of byte values for each frame of the superframe; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes recognizing the selected quantity of frame synchronization byte values in each frame of the superframe.

33. (Original) The method of claim 32 wherein selecting the quantity of frame synchronization byte values includes selecting a first number of frame synchronization byte values in a first frame; and

wherein synchronizing the received frame in response to recognizing frame synchronization bytes includes recognizing the first number of frame synchronization byte values in the first frame.

34. (Original) The method of claim 32 wherein selecting the quantity of each frame synchronization byte values in the received frame includes selecting a first number of frame synchronization bytes having a first value, and a second number of frame synchronization bytes having a second value; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response to recognizing the first number of frame synchronization bytes having the first value, and the second number of frame synchronization bytes having the second value.

35. (Original) The method of claim 32 further comprising:

selecting the quantity of frame synchronization bytes in the overhead section of a transmitted frame.

36. (Previously presented) The method of claim 35 wherein selecting the quantity of the frame synchronization byte values in the transmitted frame includes selecting a first number of frame synchronization bytes having a first value, and a second number of frame synchronization bytes having a second value;

wherein selecting the quantity of frame synchronization bytes in the received frame includes selecting a third number of frame synchronization bytes, less than the first number, having the first value, and a fourth number of frame synchronization bytes, less than the second number, having the second value; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response to recognizing the third number of frame synchronization bytes having the first value, and the fourth number of frame synchronization bytes having the second value.

37. (Previously presented) The method of claim 18 further comprising:

selecting a number of consecutive received frames in which frame synchronization bytes values are not recognized; and

falling out of synchronization in response to not recognizing frame synchronization bytes values in the selected number of received frames.

38-63. (Canceled)

64. (New) A method for variably programming the value of frame synchronization bytes in the communication of a multidimensional digital frame structure, the method comprising:

selecting the values of frame synchronization bytes in the overhead section of a transmitted frame;

sending the frame;

receiving the frame;

synchronizing the received frame in response to recognizing the frame synchronization bytes

selecting the values of the frame synchronization bytes in the overhead section of the received frames;

wherein synchronizing the received frames in response to recognizing the frame synchronization bytes includes synchronizing received frames in response to recognizing the synchronization byte values in the received frames;

selecting the location of the frame synchronization byte values in a transmitted frame;

selecting the location of the frame synchronization byte values in a received frame;

defining a superframe structure with a predetermined number of frames per superframe;

wherein selecting the values of frame synchronization bytes in the overhead section of a transmitted frame includes selecting byte values to be used for synchronization in the overhead section of each frame of the superframe;

wherein sending the frame includes sending frames in the superframe structure;

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes recognizing frame synchronization byte values in each frame of the superframe;

selecting the quantity of frame synchronization byte values in the overhead section of the received frame;

wherein selecting the quantity of frame synchronization byte values in a received frame includes selecting a quantity of byte values for each frame of the superframe; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes recognizing the selected quantity of frame synchronization byte values in each frame of the superframe;

selecting the quantity of frame synchronization bytes in the overhead section of a transmitted frame;

wherein selecting the quantity of the frame synchronization byte values in the transmitted frame includes selecting a first number of frame synchronization bytes having a first value, and a second number of frame synchronization bytes having a second value;

wherein selecting the quantity of frame synchronization bytes in the received frame includes selecting a third number of frame synchronization bytes, less than the first number, having the first value, and a fourth number of frame synchronization bytes, less than the second number, having the second value; and

wherein synchronizing the received frame in response to recognizing the frame synchronization bytes includes synchronizing the received frame in response to recognizing the third number of frame synchronization bytes having the first value, and the fourth number of frame synchronization bytes having the second value.